

Darling, F. Fraser, 1937.

A Herd of Red Deer

- a study in animal behavior;

Oxford University Press.

Territory 1 + + 7" + 11 7

p. 29.

Conservation of habit, a factor of importance for the survival of species, tends to restrict movement to a particular area. True nomads, defined as creatures which wander fortuitously and have no home ground, are rare in nature.

更三同で東二

Animals live in definite places because they like them. Familiarity with one piece of ground enables an animal to use it in the most advantageous mainer for its comfort and well-being.

territory/大キサハイラ=コッテキマルカ

P.34 Some species of mammals, like some human types, can

P. 35 live in seething masses whilst food is available; but deer, for all their highly developed sociality, must have plenty of room. ... Beast for heast, however; the density still remains will below that which would be safe for cattle. Domesticated animals of the farm also react to density of Their own species quite apart from the bare total of food available. Good land does necessarily carry a cow to one acre as compared with one to three arces on poorer ground, but, one acre may carry an even higher equivalent of stock of mixed species, all feeding on the same herbage but possibly different parts of the plants. The art of huibandry concerns itself diligently with these assortments, tacitly admitting the principle of density

in aspects officer than the purely alimental.

winter territory of home territory Fire 1=2+07, summer territory = 72 / heutral territory = 72

p. 32. Summer grounds which include the summit of the hill the shapes would not be those of probable animal territories, are, in fact, grazed communally to a large extent, but the groups retain their own social integrity. If climatic conditions call for it, each group will fall back on to its own winter territory.

population density

\$.37. On my ground the density is one deer to about 40 acres.

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3/2 1 survey is to the in over 80 = \$0 = \$0 = 70 = 1

· total = 13.00 / 度が中に74.

population, #2 = 5

1. Leopold (1933) / "unit herd'=3"=71=5
unit herd = \$\frac{2}{3}\$ one otag 7 shot =7 \(\text{LD} \)

\$\frac{1}{2}\$ \$\frac{1

2. Stag 178 47 7 8 4 + 21 3 \$ 7 7 1 stag

companies = 27+1 : 5 4 7 7 1 1

55 stags shot 1 6 4 1 = 3e 2 7 13 3e + 72 + 24 1 1

population 1 constant + +1 1

istag 1 \$ 1 1

5 x 55 + 40 (as margin for all contingencies)

= 315, (p. 39 \$ 2)

3. 8 9 1 ratio.

4. fertility ratio.

P. 43. Some hinds bear a calf each year, others in alternative years, and a hind calves for the first time at four years old. Under favourable conditions a hind may calve at three years, but in the Highlands such an event is uncommon, the average age to which deer may like is approximately fifteen years. The fertility of adult hinds is about 60 per cent, in the herds I have watched

social system

子供、生いテモ、スクラハgroup,成員トナシナイ

p. 45. When the calves are born in June they live alone for two to five days before following their mother, and this is the time when the toll is taken.

(pedacions animal=====) p. 181 = . The hind which are about to calve leave the group for a few days, At 3 p.m. she dropped the calf At 3, 30 p. m., the calf stood up for a few moments. Then it lay quiet and the hind walked away a hundred yards and began to graze, There was very little maternal solicitude apparent. ... the calf lies alone for the first few days and is visited by its dam about twice a day to be suchled. When the calf is on its feet, however, a great change occurs. The calf suckles every few minutes and the hind fondles the calf very frequently. The hind moves slowly over the ground as she grazes, turning constantly to the calf which, even if it is not yet strong on its legs, can more over very rough ground by crawling or shiffling.

The hinds drop their calves in the heather, proferably rather long heather, and in the shellered fortions of their upper winter territories, though there does not appear to be any effort to hide the calves in particularly secluded places. The calf lies alone for two to five days and it is fed by the mother twice a day, -- Once the calf is strong on the legs it follows its mother very closely, and within a few days the hind, the calf, and possibly the yearbing and two-yearold more off to the high ground; There they join the barren hinds and followers which have preceded Them,

hind group = . leader to the

P. 68. Malernal care is protracted in the red deer, extending to the third year of life of the offspring. Thus each hind may have two or three followers, and some of the other adult hinds may be the earlier offspring of a hind still in the · group. The protracted education and the high degree of sociality in this species are no doubt indissolubly linked, One hind, a mature and often an old one, is the leader of each group of hinds and followers, and usually she has a calf at foot. I have never seen an instance of her supremacy being challenged, and it is probable that she is not superceded until death removes her. I have said That usually she has a calf with her, from which we may infer that The leading hind of a group is a regular heeder and that that part of her maternal

emotions which embraces the herd as well as her own offspring is stimulated by the birth of each year's calf. In fact, a hind which ceases to be a regular breeder soon ceases to be leader.

... 見張り月初退

1.81 What gives a much more definite inkling of social behavior is the fact that the leading hind takes the position at resting-time from which most can be seen of the country and the herd. The stage do not show this delegation of responsibility so markedly, for each keeps a good look-out for himself.

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the stay company in a market of an inter make and is a correspondent These is no affarmal lander, though one amount may be in a justile to bully the well, which is early a different to so, in a · stug confund is distribut to assume. may run awan in a inter fe . ".". may still up and scatter, but the suite file is not a led retreat, The stay forthest away from the source it lesturbance takes front place ut. " ., he is just a young story in or a material beast. The formation of right this is an interesting one to the amount psychologist.

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the egocentric nature of the stage of parent dominance of the group is shown when disturbance heromes on actuality. The leading hand barns and the group gathers beined ner in retreat. The stag may go not

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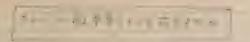
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p. 124

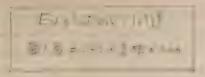
The coming of snow has a very remarkable effect on red dier and their concert a normality of the or the day, and remarked two or the day begins to flock. Two and three begins to flock. Two and three become eights and theless. In observer at that time sees no dier quiet a rains. They are morning about all the time, joining up with others, and their in strings they light their some pay for ful walk into the strait. Territ ind boundaries do not exist them, and tracks of several miles are cornects.

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· pp. 157-111

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p. 40? A magnificent hard of parties, Freedra gutteresa, sudde a approach as find of us. There must nave been at least tourty-fine troms and bat is less and faures, running on the sides of it cars.

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baby antelops / BIE

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place to the does to rear their it-sing.

selections) young when we reached there
on july 11, most of the body antisip were took

or three weeks old and were running with
their methers. The does begin to deep their
young about time 15: we saw no newly were
tauses after July 10. Listually all the does we
in milk. A single young is usual, but herris
are not infrequent.

The face is hide until they are about two weeks old; Then they present to trust to their legs and speed. Nover holess, they can run ut a very respectable rate within a few horers of will.

p, 440 One morning the caravan leader found a baby gazelle on the way to camp and brought it to us in the sleeve of his coat. It was only a few hours old and secured all wolfly legs and ears, but yet it could run fatter than a man,

autelope + wild ass + , association.

p.113. The kulon and the desert gazelle line under like conditions in the same regions and frequently seen register. In fact, if we followed a hard of assess for a few miles in the motor car, gazelles almost invariably came from either side to join in the chase.

In 1925 we found a kulon and a gazelles which appeared to be inseparable companions. Day after day we saw them in the same place grazing together, never more than a few yards apast.

^{*} Equis hemiones Frit Equis przewalkii

*コノか変切トイフノム:欠けのシ

The kulon of the central Gobi begin to drop their young during the last week of June, and we saw newly-born young as late as July 10. (p. 113)

Wild ass , 社会構成

P.115. Like the desert gazelles, the 'kulon' seeks a flat plain upon which to drop its young. They are particularly careful to avoid a region of ravines or gullies which might give cover to wolves. Also like the gazelles, they gather into herds, largely composed of mares, just before the young are born* The stallions do not entirely leave them but remain somewhat separated. Later in the summer many of the males range by themselves. The solitary individuals which we saw were invariably stallions.

The kulon seemed to prefer the hard gravel plains and would run into the sandy country only when we approached in the car. They appeared to know instinctively that we could not follow them there and would always make a direct line for soft ground, or into the lava flows which cap part of the region

about Loh.

Wild ass 11 ドレグライノ 大キサノ 群レマ ツクルカ

\$,278 The hard, gravel plain north of the lake (1= - 21 lake +1911, Tsagan Nor Fire) swarms with wild asses and antelopes, Seven miles from camp we stopped on the edge of a wide shallow depression. Even with the naked eye we could see hundreds of yellowish forms swimming in the desert mirage: wild asses, without a doubt, but never before had I seen a herd so vast. They were massed in three dense groups on the valley Hoor, and for miles the horizon was dotted with stragglers. By counting a block of two hundred we could estimate fairly accurately that there were at least a thousand animals in the herd. Subsequently, we learned that there were many more than that, for several hundred were below our sight in The bottom of a shallow ravine.

Tragan Nor n 21 7. June 10 = 31/ 7: 7 41107

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P. 294

There was not a sign of human life, but a dry lake-bed ran the entire length of the valley, which swarmed with autolope and wild asses. They were feeding on alfalfa, and we found this plant growing wild at half a dozen spots in other parts of the Gobi. I never have seen such a concentration of game in a small area. Antelopes were running leside the car and crossing our course every morement; tiny fawns hardly larger than rabbits jumped out from almost under the wheels, where they had been lying flat on the ground

with necks outstretched.

Herd after herd of wild asses pounded along beside us, mable to tear themselves away from the fascination of the car, Most of the asses were mores and many of them were chaperoning fuzzy, long-legged colts. It was amusing to see the little fellows bend to the work of keeping up with their mothers. With ears laid tack and slim legs flying they put every ounce of strength and determination into what probably was the first time in their short lives that they had run from danger. Once we saw four wild asses tighting. Kicking and liting viciously, they kept at it until the car approached and they joined the zoological assemblage which we were driving up the dry lake-